

I / I WPAT - ©Thomson Derwent  
AN - 1968-19961Q [00]  
TI - Polymeric toning agent pref acrylic for  
DC - A00  
PA - (RICO ) RICOH KK  
NP - 4  
NC - 4  
PN - BE-717572 A 0 DW1968-00 \*

JP71006157 B 0 DW1971-08

US3585140 A 0 DW1971-32

DE1772825 B 0 DW1972-30  
PR - 1967JP-0044062 19670710  
AB - BE-717572 A

A toning agent for an electrophotographic developer comprises a pigment onto which a vinyl copolymer is graft polymerised, or a mixture of pigment and copolymer. The copolymer contains at least one monomer from each of 3 groups (1)  $R_1CH=CXR_1$ , (2)  $R_1CH=CYR_1$  and (3)  $R_1CH=CZR_1$  where  $R_1$  is H, COOH, CN, Cl,  $C_nH_{2n+1}$  ( $1 \leq n \leq 5$ ); X is from  $-COOR_2$  (in which  $R_2$  is  $C_nH_{2n+1}$  ( $4 \leq n \leq 20$ ),  $-C_nH_{2n+1}$  ( $4 \leq n \leq 20$  and  $-OCOC_nH_{2n+1}$  ( $4 \leq n \leq 20$ ); Y is  $-COO(CH_2)_n$  where  $n$  is 2 to 4 and  $R_3, R_4$  are H, C1 to 4 alkyl, phenyl, COOH, OH,  $COOR_5$  in which  $R_5$  is C1 to 3 alkyl,  $-CH_2CH_2CN$ ,  $-CH_2CH_2OH$ ,  $-CH_2CH_2$ -halogen or ; Z is  $COOR_6$  (in which  $R_6$  is  $-CH_2C_6H_5$ ,  $-CH_2CH_2C_6H_5$ , or  $-NHCH_2OH$ ,  $-NHCH_2OR_7$  (in which  $R_7$  is C1 to 4 alkyl,  $C_nH_{2n+1}$  ( $1 \leq n \leq 7$ ) or H.

MC - CPI: A04-D A04-E A04-F06E A12-L02  
UP - 1968-00  
UE - 1971-08; 1971-32; 1972-30

09/331,729  
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